ADDENDUM

FM02
Fan Module

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This document supplements the service manual, providing additional information concerning the FM02 Fan Module for the CP80 series ***CompactPCI***® chassis.

Refer to the *Service Manual* for more information.

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FM02 Fan Module

Overview

The FM02 Fan Module provides the primary cooling capability for the CP80-12 chassis. The FM02 provides the following features:

- Six 3.62" (92 mm) dual-speed fans, each equipped with a tachometer
- Each fan is rated at 75 CFM individually
- A front panel status LED confirms whether the module is operating normally
  - The LED will be ON (green) to signal that the fan module is working properly
  - The LED will be OFF if a problem exists with the fan module

Hot-Swappable

The design of the FM02 Fan Module allows it to be removed or replaced while the power is on and without interrupting the system.

A removed fan module must be replaced within one minute to ensure uninterrupted system operation.

Platform Management

The FM02 provides information on fan speed and internal temperature to the Platform Management System.

Key points relating to how the fan module and the Platform Management system interact are as follows:

- IPMI-compliant information from the FM02 is available to the Platform Management system for status reporting and event logs
- Information on the speed and status of each fan is constantly updated and available to the Platform Management system
- Fan speed is controllable by the fan module itself, the alarm board, or a Platform Management application

Fan Speed

The fans in the FM02 can operate at two speeds:

- 2,600 RPM (normal speed)
- 4,000 RPM (high speed)

The fans normally spin at low speed to reduce noise and conserve power. However, any of the following conditions can cause the system to set the fans to high speed:

- When the temperature sensed in the fan module exceeds a preset value
- When the CP80 Platform Management System commands high speed
- When a fan tachometer shows that a fan has failed or is falling below the minimum speed for its current setting

Fault Tolerance

The fan module is fault tolerant. If a single fan inside the module fails, the module can continue to cool the chassis.

RadiSys recommends that a fan module with a failed fan be replaced as soon as possible. A removed fan module must be replaced within one minute to ensure uninterrupted system operation.

Airflow

The fan module draws air into the chassis through the vents directly beneath the front peripheral expansion slots. Airflow is then directed upward and expelled from the vents above the rear peripheral expansion slots.

To allow proper airflow and to help prevent overheating, ensure that there are no obstructions to airflow at the front or rear panels of the chassis. For more information, see the *Chassis Service Manual*.

Removal and Replacement

The fan module can be replaced in a CP80-12 chassis while the power is on and without interruption to the system.

To replace a fan module (Figure 1):

1. Loosen the captive thumbscrew
2. Grasp the handle securely and slowly pull the fan module out of the chassis
3. Slide the replacement module into place
4. Firmly tighten the thumbscrew

Always insure that the thumbscrews are tightened before shipping or moving the chassis.

More...

For more information, see the following:

- The *Chassis Service Manual*.
- *Intelligent Platform Management Interface Specification*. © Intel Corporation, Hewlett-Packard Company, NEC Corporation, Dell Computer Corporation.

Figure 1. Removing a Fan Module

This illustration shows the CP80-12 chassis.